DOCUMENT RESUME

ED 303 491 TM 012 709

AUTHOR Boser, Judith A.
TITLE Teachers Education Follow-Up Surveys: Are the Respondents Representatives of the Group?
PUB DATE Nov 88
NOTE 11p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (Louisville, KY, November 9-11, 1988). Printed on colored paper.
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Followup Studies; *Graduate Surveys; Higher Education; *Mail Surveys; Occupational Surveys; Sampling; Surveys; Teacher Certification; *Teacher Education; *Test Bias; Testing Problems
IDENTIFIERS Nonrespondents; Response Rates (Questionnaires); *Teacher Surveys

ABSTRACT

An attempt was made to determine whether a non-response bias exists in the annual follow-up surveys of graduates of teacher education programs when the surveys focus on more than employment. Subjects were 291 graduates of teacher certification programs at a major university in the southeastern United States from Fall 1986 through Summer 1987. In an initial survey concerning employment, 88.6% of the subjects responded. A second follow-up was conducted that requested more detailed information, including evaluation of the teacher preparation program and career plans. A total of 227 subjects (78%) responded. Sixty-four subjects did not respond, and most of these non-respondents could not be contacted. Data were also collected from analyses of subjects' college records. Chi-square tests comparing respondents and non-respondents on employment, major, status, date of graduation, location, and gender revealed no significant differences for these variables. Non-respondents tended to be older than respondents, but no significant differences were found for grade point average and scores on the American College Tests and the National Teacher Examination. Since the survey had a 78% response rate, it was encouraging to know that respondents were representative of the entire sample. Two tables provide the results of chi-square and Mann-Whitney comparisons of the study data. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED303491

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

JUDITH A. BOSER

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Teachers Education Follow-up Surveys:

Are the Respondents Representatives of the Group?

Judith A. Boser

Bureau of Educational Research and Service

The University of Tennessee

Paper presented at the annual meeting of the Mid-South Educational Research Association, Louisville, KY, November 9-11, 1988

TM012709

Teacher Education Follow-up Surveys:

Are the Respondents Representative of the Group?

Whenever a mail survey fails to achieve a high response rate, there is some question about a possible bias due to nonresponse by part of the population. Would the survey results have been different if all of those sent questionnaires had responded? Are there some essential differences between those who responded and those who did not? Researchers have attempted to examine differences between early and late respondents as well as nonrespondents in an attempt to find the answer. It is assumed that late respondents might well have been nonrespondents, had additional mailings or attempts to contact them not been undertaken, and thus they were potential to nonrespondents. Ellis, Endo and Armer (1970), however, concluded that comparing early and late respondents does not produce the same results as comparing respondents with nonrespondents.

Comparison of the respondents with the target population may give an indication of the representativeness of the respondents. This is possible only if variables of interest can be determined for the nonrespondents (or for the population as a whole). There is some evidence that respondents differ from nonrespondents in various areas of research in that they are better educated, have higher intelligence or achievement scores (Clausen & Ford, 1947; Ellis, Endo & Armer, 1970; Gannon, Nothern & Carroll, 1971; Macek & Miles, 1975; Nielsen, Moos, & Lee, 1978; Reuss, 1943), have more interest or involvement in the topic of the research (Donald, 1960; Reuss, 1943)), have interest in the topic under study (Donald, 1960; Brown & Wilkins, 1978) are involved in or have loyalty to the sponsoring organization (Donald, 1960; Reuss, 1943), are rural residents (Ellis, Endo, & Armer, 1970; Reuss, 1943),

are highly valued employees and females (Gannon, Nothern, & Carroll, 1971; Nielsen, Moos, & Lee, 1978), have job security and active community involvement (Hockstim & Athanasopoulos, 1970).

Follow-up surveys are commonly used to obtain information from college graduates about their employment status, career plans, and perceptions of their undergraduate programs. Such surveys are not necessarily noted for high response rates, however, and have been found to vary from 10% to 100% (Boser, 1988). Even when there is a fairly high response rate, the question of nonresponse bias may be unanswered. In a college employment study of alumni conducted over forty years ago, those not employed were found to be underrepresented (Shuttleworth, 1941). The present study was undertaken to determine if there was a nonresponse bias in the annual follow-up surveys of graduates that focus on more than employment.

Method

Subjects

Two hundred ninety-seven individuals completed initial teacher certification programs at a major university in the southeast from fall quarter 1986 through summer quarter of 1987. Two hundred thirty completed certification programs while earning BS/BA degrees; 67 were postbaccalaureates, including 18 who were part of a special year-long intensive, externally funded program. All 297 individuals were considered subjects for the study. Six individuals were ultimately deleted from the group when all attempts to contact them failed. In effect, they were unreachables rather than nonrespondents.

Procedures

Information was gathered initially in the fall of 1987 through an employment follow-up survey. Subjects were asked through a mail survey to

supply their current address, occupation (if employed), and employer on an enclosed post-paid return postcard. Subjects who were not teaching also had the option of noting a need for assistance from the Career Placement and Planning Office. A second mailing, including a second return postcard, was sent approximately one month later. Telephone calls were placed to nonrespondents in the state as a final attempt to obtain the information. Two hundred sixty-three of the 297 graduates (88.6%) were contacted in this study.

A second follow-up survey was initiated in March to obtain more detailed information from graduates including their evaluation of the teacher preparation program and their career plans. A preliminary letter was sent to each of the 297 graduates, followed by the questionnaire one week later. Three follow-up mailings were sent, the second containing another copy of the questionnaire. Deletion of the names of six of the graduates because of inability to reach them left a total of 291. A total of 227 graduates (78%) returned completed questionnaires for analysis. This left 64 nonrespondents who had apparently received the questionnaires but chosen not to respond.

Telephone calls were placed to local nonrespondents in an attempt to obtain their responses to the eight program evaluation items on the survey for comparison with responses of those returning the questionnaires. However, only five of the local nonrespondents were contacted after repeated telephone attempts. It was clear, however, that the telephones had not been disconnected, as would have been the case if the individuals had relocated and not received their mail. In some cases, there was no answer to repeated calls, and it was possible that someone else (not the graduate) was receiving calls at that number. Because of the small number of nonrespondents contacted, comparison of their responses to the evaluation questions were not compared with those of the survey participants.

Occupation and location of nonrespondents were available from information in the fall employment survey. Occupation was analyzed in two ways. The first analysis combined public and private school teachers as one group and included all others as a second group. The second analysis created a third group consisting of those who were employed in education but not as public or private school teachers. Gender, age, status (graduate or postbaccalaureate) graduation date for graduates, undergraduate grade point average of graduates, ACT scores, and percentile scores on the core battery of the National Teachers Examination (communication, general knowledge, and professional knowledge tests) were available from college records.

Analysis

Chi-square tests were used to compare respondents and nonrespondents on employment, date of graduation, location and gender. An independent t-test was used to compare the two groups on GPA. Mann-Whitney nonparametric tests were used for comparison of scores on the ACT and the NTE. The .01 level of significance was used because of the number of statistical tests that were conducted.

Results

There were no significant differences between respondents and nonrespondents on the chi-square comparisons for gender, location, graduation date of graduates, major, status, and occupation (see Table 1). The t-test comparing respondents and nonrespondents (graduates only) on undergraduate cumulative grade point average was also not significant ($t=0.88$, $p=.379$). The Mann-Whitney comparisons showed a significant difference in age (with nonrespondents older than respondents), but no significant differences on ACT or any of the three NTE core battery tests.

Discussion

Nonrespondents were found to be similar to respondents on all variables except age, with the nonrespondents being older than the respondents. Since the survey had a 78% response rate, it is encouraging to know that the respondents are typical of the population under study and that a 78% response rate may provide a true representation of the group. The nonrespondents who were the focus of this study were all college graduates, some with postbaccalaureate experiences, and individuals who might be expected to have some loyalty to the sponsoring institution. Those factors have been associated with higher probability of participation in mail surveys. This study did not find a significant gender difference, as was found by previous researchers, however there was a trend in this direction with 80% of the females responding while only 71% of the males did so.

One might expect that those teaching would respond at a higher rate to the institution that prepared them to teach than those not teaching. This was not the case, however. The response rate for those teaching in public or private schools was 81%. Those employed in other capacities in the field of education responded at the highest rate (92%), followed by those employed in other areas, in graduate school, or not employed (88%). This is somewhat inconsistent with the results of Shuttleworth (1941), who found those not employed to be underrepresented in an employment survey. The context is similar: the survey was undertaken to determine those employed after college. The present study is more specific, however, in that it focuses on a particular type of employment for which the institution prepared the individual. First-year teachers frequently find themselves spending much of their evenings and weekends preparing for their classes or grading papers.

Their employment demands more of their time than many other occupations, and it may be that those not teaching had more leisure time in which to respond.

The major question still unanswered is whether nonrespondents differ from respondents in their evaluation of their teacher preparation programs. Attempts made to contact local nonrespondents by telephone to determine whether or not their evaluative ratings of the teacher preparation program were consistent with those of the respondents were not very successful. The five local nonrespondents who were ultimately reached after numerous telephone calls were insufficient to provide credible information for comparison with the large group of respondents. In talking with nonrespondents on the telephone, it was obvious that some were reluctant to evaluate their program, stating that they were not in a good position to make judgments about the program since they had not taught. Some prompting was necessary before they would make even tentative ratings. Further study of this particular aspect of the nonresponse effect should be made in the future.

References

Brown, T. L., & Wilkins, B. T. (1978). Clues to reasons for nonresponse, and its effect upon variable estimates. Journal of Leisure Research. 10(3), 226-231.

Boser, J. A. (1988, July/August). Teacher-education graduate surveys: Variables related to response rate. The Journal of Educational Research 81(6), 369-373.

Clausen, J. A., & Ford, R. N. (1947). Controlling bias in mail questionnaires. Journal of the American Statistical Association, 43(240), 497-511.

Donald, M. N. (1960). Implications of nonresponse for the interpretation of mail questionnaire data. Public Opinion Quarterly. 24(1), 99-114.

Ellis, R. A., Endo, C. M., & Armer, J. M. (1970). The use of potential nonrespondents for studying nonresponse bias. Pacific Sociological Review. 13(2), 103-109.

Gannon, M. J., Nothern, J. C., & Carroll, S. J. (1971). Characteristics of nonrespondents among workers. Journal of Applied Psychology. 55(6), 586-588.

Hochstim, J. R., & Athanasopoulos, D. A. (1970). Personal follow-up in a mail survey: Its contribution and its cost. Public Opinion Quarterly, 34(1), 69-81.

Macek, A. J., & Miles, G. H. (1975). IQ score and mailed questionnaire response. Journal of Applied Psychology, 60(2), 258-259.

Nielsen, H. D., Moos, R. H., & Lee, E. A. (1978). Response bias in follow-up studies of college students. Research in Higher Education, 9, 97-113.

Reuss, C. F. (1943). Differences between persons responding and not responding to a mailed questionnaire. American Sociological Review. 8(4), 433-438.

Shuttleworth, F. K. (1941). Sampling errors involved in incomplete returns to mail questionnaires. Journal of Applied Psychology, 25, 588-591.

TABLE 1

Chi-Square Comparisons of Respondents and Nonrespondents

	Respondents	Nonrespondents	X^2	p
Gender				
Male	44	18	1.960	.162
Female	183	45		
Location				
Local	70	21	0.493	.781
In state	124	32		
Out of state	33	11		
Graduation date (graduates only)				
December	79	25	0.842	.839
March	17	3		
June	63	18		
August	12	4		
Major				
Art/Music	13	6	4.167	.526
Health/P.E.	8	5		
Special Ed.	25	8		
Tech. & Adult	20	6		
Elementary	75	20		
Secondary	86	19		
Status				
Graduate (BS/BA)	172	52	0.565	.452
Postbaccalaureate	55	12		
Occupation				
Teaching	136	31	2.348	.126
Not teaching	91	11		
Teaching	136	31	3.162	.206
Employed in Ed.	33	3		
Other	58	8		

TABLE 2

RESULTS OF MANN-WHITNEY COMPARISONS

	n	u	z	p[a]
Age	283	4799	3.0167	.0026
ACT	182	2737	.6779	.4979
NTE Communication	.228	4141	.7503	.4531
NTE Gen. Knowledge	228	4347	.2501	.8025
NTE Prof. Knowledge	228	4423	.0656	.9477

[a] two-tailed probability